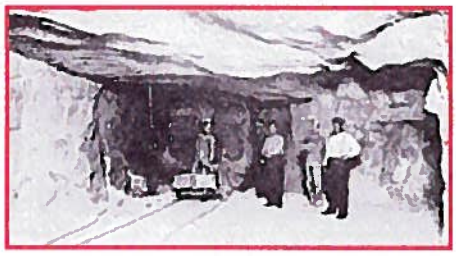

The Coal Mining Heritage of Lafayette

From the late 1880s until the 1930s, Lafayette was a major coal town. Read the history of the coal mining era, examine the location of coal mines within the Lafayette area, and enjoy historic photos of the Waneka Lake Power Plant and the Simpson Mine with the attached *Coal Mines of the Lafayette Area* brochure. This brochure was created by the Lafayette Historic Preservation board, and it highlights the fascinating Coal Mining Heritage of Lafayette.

- *Coal Mines of the Lafayette Area* – page 1
- *Coal Mines of the Lafayette Area* - page 2
- *Coal Mines of the Lafayette Area* – map

The social legacy. The social legacy of mining is equally important to contemporary Lafayette. The mines required far more labor than was available locally and quickly attracted experienced miners and laborers from Europe and other parts of the U.S. The result was a community comprised of many ethnic groups, including Welsh, English, Scottish, Irish, central European, Hispanic, Italian, and Swedish workers and their families. Local farmers and ranchers also shared in the coal boom and worked as miners in the winter when coal production was high and agricultural work slow. A sense of this ethnic diversity can be gained by walking through the Lafayette cemetery at Baseline and 111th Street. The variety of family names gives a sense of the many nationalities that have contributed to Lafayette's history. Although the mining life was hard, families were fun-loving and many social activities centered around schools and churches. This legacy continues today as Lafayette remains one of the most diverse and interesting communities along the Front Range.

Further Reading

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Credits and sources. This map was compiled from digital sources by Kenneth E. Foote and Anna Milan of the Department of Geography at the University of Colorado at Boulder. Text is by Kenneth E. Foote and Vicki Trumbo. The mine locations are available from the Colorado Geological Survey (Carroll and Bauer 2002). The locations of mine extents and faults are available from the United States Geological Survey (Roberts, Hynes, and Woodward 2001) and the digital files are online at *http://energy.cr.usgs.gov/other/frip/index.htm*. Digital maps of rivers, water bodies, railroads and major roads were downloaded from Boulder County Geographic Information Services at *www.co.boulder.co.us/gis/*. Local roads are from the 2002 update of the 2000 TIGER maps produced by the United States Bureau of Census at *www.census.gov*. The quality and completeness of each of these sources varies, so the position of features on this final map should be read as approximate rather than absolute.

Photographs of Black Diamond Fuel crew; the Simpson Mine; East Cleveland Street from the Simpson mine; and Simpson camp courtesy of the Lafayette Miner's Museum. Photographs of the Waneka Lake power plant courtesy of Dean and Norma Ross. All other photographs by Kenneth E. Foote. Photographs used with permission; all rights reserved. Thanks to Glenda and Phil Chermak, Stephanie Schmidt, Andy Patten, Dean and Norma Ross, Cathleen Norman, and Stephen Roberts for providing help with this project.

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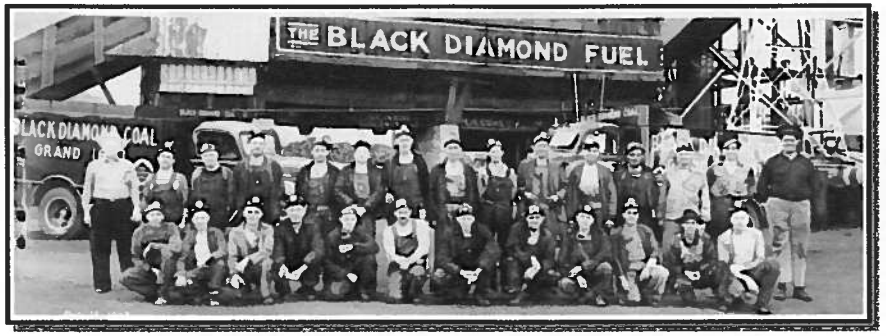


The Coal Mining Heritage of Lafayette

From the late 1880s until the 1930s, Lafayette was a major coal town. Mines in and around Lafayette, Louisville, Erie, Superior and Marshall were suppliers of fuel for heating and power along the Front Range. Some mines in this Boulder-Weld county coal field continued production for several more decades, but the industry passed its peak before the Second World War as natural gas for heating became widely used and as better grades of coal from more distant mines became economically competitive.

Much of the evidence of coal mining has since disappeared from the landscape. The shafts were filled and the heavy equipment and buildings were sold, moved, or scrapped. New development has covered other traces, as at the Black Diamond mine on the northwest corner of Baseline and U.S. Highway 287. A sign, pictured to the left, at the new Black Diamond Center and shaped like the winding gear tower over a mineshaft, provides a faint reminder of the mine. Other evidence still remains of Lafayette's mining heritage in the town's architecture and place names. You can explore these features using this map and guide.

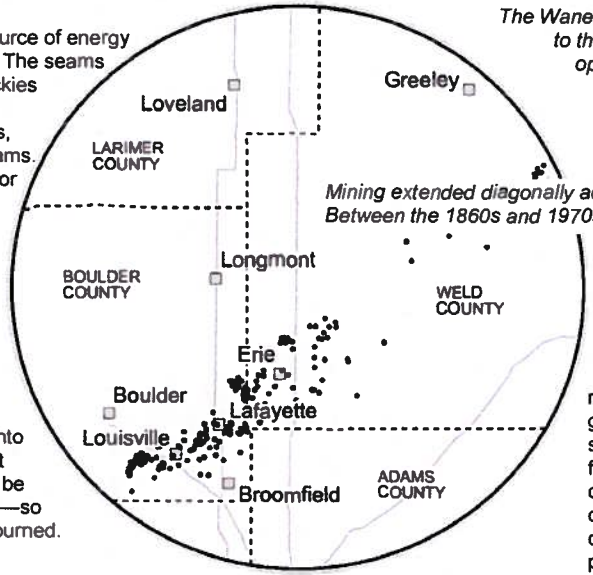
Coal in Boulder and Weld Counties

Coal is one of Colorado's greatest resources with beds underlying approximately 28 percent of the state's land area. An inventory by the Colorado Geological Survey for the years 1864 to 2002 lists 1,736 mines in the state of which about 163 were in Boulder and Weld counties. The Denver coal basin of which the Boulder-Weld fields are part has the distinction of being one of the first deposits to be mined. Beginning in the 1860s and 1870s, settlers mined coal for local consumption by digging horizontal openings called adits into coal seams that were close to the surface. With increased demand and better rail transportation in the 1880s and 1890s, companies dug shafts downward into the coal deposits and mined underground.

The coal in the Boulder-Weld fields is mostly bedded in seven seams, although the number of seams varies somewhat from place to place. The coal seams are interlayered with sandstones, shales, and clays of the Laramie Formation, all being sedimentary deposits dating back about 80 million years. The seams vary in thickness and quality. Some are as thin as a foot and were never economical to mine; others are as thick as 14 feet and were the layers the miners targeted. The coal varied from sub-bituminous B to sub-bituminous C, meaning its heating capacity was greater than wood and low-grade lignite coal, but far less than the heating capacity of bituminous and anthracite coals. The best seams in Boulder and

Weld counties tended to be the middle layers. Depending on local topography and erosion, these varied in depth from 50 to over 400 feet below the surface.

These coal beds offered a welcome source of energy along the Front Range, but had limitations. The seams were folded and faulted later when the Rockies rose to the west. Subsequent erosion and deposition have hidden most of these faults, but underground they interrupt the coal seams. Miners could follow some layers hundreds or even thousands of feet underground, but then encountered faults where the seams disappeared upward or downward. To retunnel and move equipment up and down was expensive, so many mines stopped along fault lines. The coal under Lafayette also had the disadvantage of its water content; when it dried, it flaked and powdered. Lump coal was the premier product during the period of peak mining, because solid pieces of coal could be fed into furnaces and boilers. Coal powder was not of much value, so Lafayette coal tended to be mined when needed—in the winter months—so that it would not dry out before it could be burned.

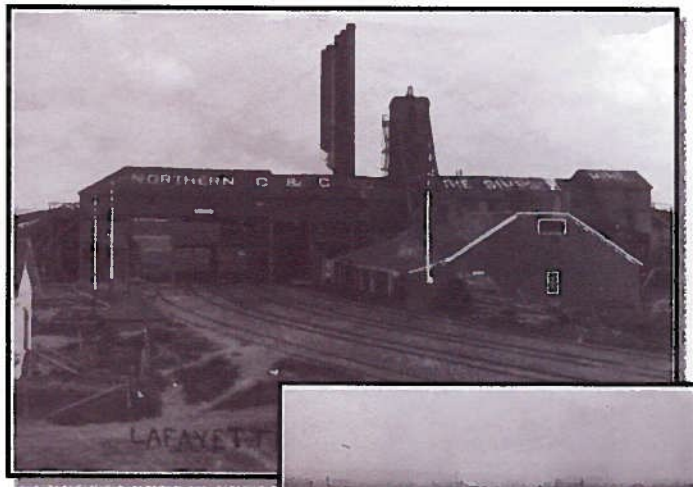


Mining extended diagonally across Boulder and Weld counties. Between the 1860s and 1970s, 163 mines produced coal here.

The Waneka Lake power plant supplied electricity to the Lafayette area between 1907 and the opening of the Valmont station in Boulder in the 1930s. The generating station was on the south side of the lake where a park is now found.

The Coal Mines and Camps

The advent of large-scale mining in the 1880s and 1890s changed Lafayette both physically and socially. The coal boom brought industry to what had been until then a small ranching and farming community. Heavy equipment was needed at the pit heads as seen below at the Simpson Mine. Roads and railroads were also developed and expanded to meet the demand. So many miners moved to the area that some mines built camps to house workers and their families.



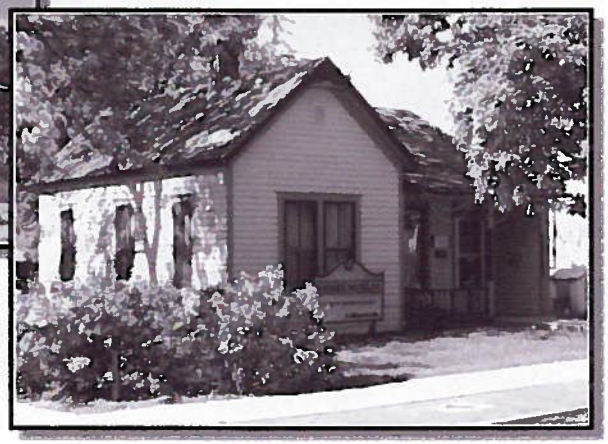
The Simpson mine (above) one of the largest mines in Lafayette was at the east end of Simpson Street and was bordered by a camp for miners (right).

The Legacies of Mining

The environmental legacy. The greatest environmental problem associated with the old mines is subsidence when tunnels and chambers collapse underground. This shifting below ground sometimes leads to large pond-like depressions on the surface. Even modest subsidence can crack and damage buildings, roads and other structures. Lafayette has been fortunate—most of the old town was undercut by mines, but relatively little subsidence has occurred. The mines were deep enough and the layers above stable enough to have little effect on the surface. Development was restricted for many decades in some areas of Lafayette over old mines, as near the Rothman Open Space, until it was clear that subsidence would not be a problem. The old mines have not resulted in the contamination of ground water as has been problem in hard rock mineral mines further west in the Rockies.

The architectural legacy. Lafayette's mining history is still reflected in its historic residential and commercial buildings, even if the mines and railroads are gone. Because Lafayette was home to the mine workers, not the mine owners, houses were small frame cottages for the most part. Many of these small mine company houses were moved in from other mine camps in the area. The typical house was a modest, front-gabled, side-gabled, or hipped-roof box style. Although many of these small homes have been significantly altered or enlarged, some have been preserved and still exhibit significant architectural integrity. Other buildings from the mining period still exist—shops, churches, a boarding house, and a rail depot. A self-guided walking tour available at the Lafayette Miner's Museum and Lafayette Historical Society will help you find these buildings in central Lafayette.

This hipped-roof house (left) is a typical of those built for miners. Located at 311 E. Oak Street, this house was moved from the Canfield mine that was once near Erie.



This house (right) at 108 E. Simpson Street was moved from the Gladstone mine and is now home to the Lafayette Miner's Museum

Coal Mines of the Lafayette Area

MINE LOCATIONS

The names and dates of operation are listed for each mine. Mines sometimes changed names with new owners so several names are listed.

EXTENT OF MINING

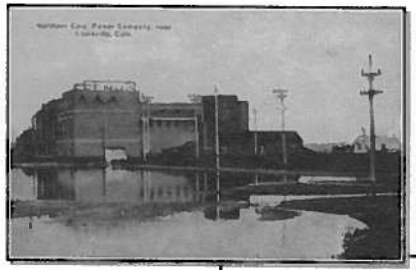
Records of mine locations and the extent of mining were maintained by the State of Colorado for reasons of taxation, property ownership, and mineral rights. For this reason, it is possible to map—at least approximately—where mining took place. We say approximately because it was not unusual for mine owners to "poach" coal outside the limits of their mineral rights along the edges of the mine. It is nearly impossible to establish now how much poaching took place and in what areas.

Mines extended under almost all of Old Town Lafayette as well as areas of more recent development. Fortunately, the mines in the Lafayette area were deep enough and the layers above the mines stable enough that subsidence has not been a major problem.

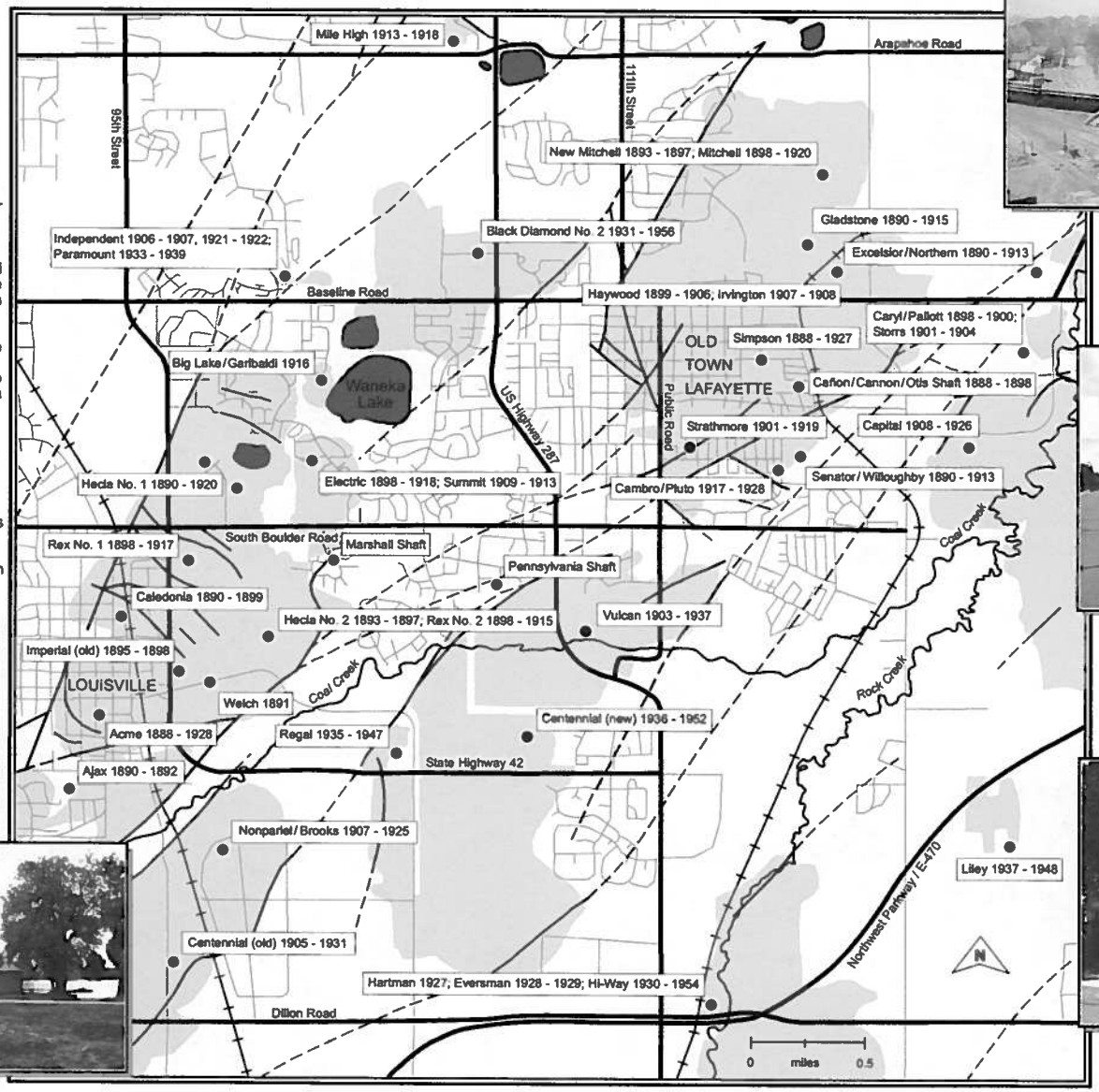
Known Fault / Inferred Fault

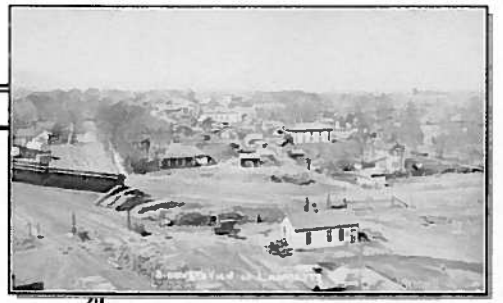
FAULTS

The faults shown on this map are underground in the coal seams and are rarely visible at the surface. Faults in the coal seams often limited production because mining across a fault could involve retunneling and repositioning of equipment. Many mines stopped when faults were encountered.



The Waneka Lake power plant was a local landmark for over half a century. Put into operation in 1907 and maintained as a substation after the Valmont generating station was opened, the Waneka plant was closed in 1957 and demolished in the 1960s. The Waneka Lake boathouse (right) is now on the site of the power plant.





The photo above gives a view west over Lafayette from atop the Simpson mine in about 1915. East Cleveland Street runs west near the left edge of the photo. The old business district along East Simpson Street is visible in the center of the photo. Today's Cleveland Street (below) shows no evidence of the Simpson mine or of the rail lines that once ran through town.

Some of the residential and commercial buildings visible in the 1915 photo (top) remain part of Lafayette's townscape. One example (below) at 600 E. Simpson was built about 1892 and was used for many decades as a boarding house for miners. It appears just to the right of the center of the 1915 photo.

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